

REMARKS

Claims 16-18, 20-29, 50-74 are pending in the application with claims 16 and 55 being independent. Applicant respectfully submits that each of the pending claims are allowable over the asserted references for at least the reasons set forth below.

Claim Objections

Claim 25 has been objected to because the Examiner asserts that the phrase "is oriented at an angle to a horizontal with respect" is grammatically incorrect because the word "horizontal" is not a noun. Applicant respectfully disagrees. The word "horizontal" is a noun, and is recognized as such and defined by numerous dictionaries as "a horizontal line, plane, etc." See, e.g., Webster's New World Dictionary 650 (3d College ed. 1986). Moreover, applicant submits that those skilled in the art would understand what is claimed when claim 25 is read in light of the specification. For example, Figure 9, and its accompanying text, describe that the feed inlet is oriented at an angle to a horizontal (e.g., the horizontal H' in Figure 9) with respect to an upper surface of the monolithic manifold. For at least these reasons, applicant respectfully requests reconsideration and withdrawal of the objection.

Claim Rejections Under 35 U.S.C. § 103

Rejection of claims 16, 18, 20, 21, 25-27, and 29 over Trost and Fay

The Examiner has rejected claims 16, 18, 20, 21, 25-27, and 29 as obvious over Trost (U.S. Patent No. 3,229,918) in view of Fay (U.S. Patent No. 3,559,895), stating "[w]hile Trost does not specifically recite that Trost's grinding chamber is operable to impart particle-on-particle size reduction of material in the chamber, in a closely related art, Fay teaches that such a chamber may be used for reduction of material both by colliding of the particles and by abrading contact with the internal wall." Applicant respectfully requests withdrawal of this rejection for at least the following reasons.

Trost does not describe a monolithic manifold including a cycloid-shaped grinding chamber formed in a front face of the manifold and operable to impart particle-on-particle size reduction of material within the grinding chamber. Instead, Trost describes that grinding takes

place within an impact chamber 56, which is not cycloid-shaped. To overcome this deficiency, the Examiner attempts to equate the classification chamber 44 of Trost to the claimed cycloid-shaped grinding chamber. However, not only is the classification chamber 44 not part of the body member 11, which the Examiner equates to the claimed monolithic manifold, but the cycloid-shaped classification chamber 44 of Trost is not a grinding chamber. Instead, Trost describes the classification chamber 44 as a low velocity chamber permitting smaller particles to be separated (i.e., classified) and to exit through an outlet and larger particles to return to the impact chamber 56 where the particle-on-particle size reduction actually takes place.

There is no description or suggestion in Fay that would lead one of ordinary skill in the art to modify the classification chamber 44 of Trost to provide particle-on-particle size reduction as proposed by the Examiner. Such a combination is purely a hindsight reconstruction of Trost's device based on applicant's claims.

As discussed above, Trost already includes impact chamber 56 that provides for particle size reduction, and there is nothing in Fay to suggest that any benefit could be obtained by modifying classification chamber 44 of Trost to form a second grinding chamber as the Examiner suggests. It would also seem that modifying Trost's classification chamber to provide abrading contact between the particles and the internal wall of the chamber, as described by Fay, would have the disadvantage of introducing mechanical abrasion of the wall liners (e.g., liner 34), which is of concern to Trost (see, e.g., col. 1, lines 24-27; col. 5, lines 21-22), and further, since Trost's classification chamber 44 only includes an entrance and exit, for the classification chamber 44 to achieve any suitable form of grinding would require that the exit be closed off to provide for the requisite recirculation of the particles within the chamber 44. Trost does not disclose or suggest such a modification, and nothing in Fay suggests modifying Trost's chamber in such a manner. Accordingly, one of ordinary skill in the art would not have been motivated to combine the teachings of Trost and Fay to arrive at applicant's claimed invention.

For at least these reasons, claims 16, 18, 20, 21, 25-27, and 29 are allowable over Trost in view of Fay.

Rejection of claims 17 and 18 over Trost, Fay, and Coombe

Claims 17 and 18, which depend either directly or indirectly from claim 16, have been rejected as being obvious over Trost in view of Fay and further in view of Coombe (U.S. Patent No. 3,840,188). Applicant respectfully requests withdrawal of these rejections.

Coombe does not overcome the deficiencies in Trost and Fay discussed above with reference to claim 16. Furthermore, the Examiner has failed to provide a *prima facie* case of obviousness. The Examiner states that it would be obvious to provide Trost (as modified) with a groove for a seal in view of Coombe to improve sealing. However, Coombe is not concerned with providing a non-circular groove and seal to seal around a grinding chamber, but rather with providing o-ring seals between various components that make up a slurry feed device (see, e.g., col. 2, line 63 to col. 3, line 2, lines 12-14; Fig. 3).

For at least these reasons, claims 17 and 18 are allowable over Trost, Fay, and Coombe.

Rejection of claims 22-24 and 50-54 over Trost, TrostII, and Fay

Claims 22-24 and 50-54, which depend either directly or indirectly from claim 16, have been rejected as being obvious over Trost in view of Trost (U.S. Patent No. 2,704,635) ("TrostII") and Fay. Applicant respectfully requests withdrawal of these rejections.

TrostII does not overcome the deficiencies in Trost and Fay discussed above with reference to claim 16. For example, there is no description or suggestion in TrostII that would lead one of ordinary skill in the art to modify the classification chamber 44 of Trost to provide particle-on-particle size reduction as proposed by the Examiner. Such a combination again is purely a hindsight reconstruction of Trost's device based on applicant's claims.

For at least these reasons, claims 22-24 and 50-54 are allowable over Trost in view of TrostII and Fay.

Rejection of claim 28 over Trost, Fay, and Andrews

Claim 28, which depends from claim 16, has been rejected as being obvious over Trost in view of Fay and in view of Andrews (U.S. Patent No. 2,032,827). Applicant respectfully requests withdrawal of this rejection.

Andrews does not overcome the deficiencies in Trost and Fay discussed above with reference to claim 16. For example, there is no description or suggestion in Andrews that would lead one of ordinary skill in the art to modify the classification chamber 44 of Trost to provide particle-on-particle size reduction as proposed by the Examiner. Such a combination again is purely a hindsight reconstruction of Trost's device based on applicant's claims.

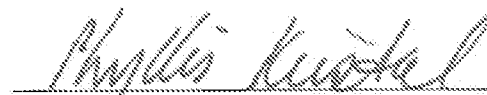
For at least these reasons, claim 28 is allowable over Trost in view of Fay and Andrews.

Applicants do not acquiesce in the Examiner's characterizations of the art. For brevity and to advance prosecution, Applicants may not have addresses all characterizations of the art and reserve the right to do so in further prosecution of this or a subsequent application. The absence of an explicit response by Applicants to any of the Examiner's positions does not constitute a concession of the Examiner's positions. The fact that Applicants' comments have focused on particular arguments does not constitute a concession that there are not other arguments for patentability of the claims. Applicants submit that all of the dependent claims are patentable for at least the reasons given with respect to the claims on which they depend.

No fees are believed to be due at this time. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: March 7, 2007



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